

Resinlab® EP1225 Black Unfilled Epoxy Adhesive

Category : Polymer , Adhesive , Thermoset , Epoxy , Epoxy Adhesive

Material Notes:

Resinlab™ EP1225 Black is a two part unfilled epoxy adhesive designed for bonding of metals, ceramics and most plastics. It has slightly thixotropic viscosity to give gap filling ability but still self level before cure. It cures to a tough semi-rigid polymer providing excellent protection against water, humidity, salt spray and other chemicals. It was especially formulated to 2A:1B volume mix ratio for use in side-by-side dispensing cartridges and meter/mix and dispense equipment. Cure is normally achieved at room temperature within 24 hours. Elevated temperatures can be used to accelerate development of cured properties. 65°C for 10 minutes is usually sufficient to obtain a tack free surface, full cure in 60 minutes. Time to heat substrate must be taken into account. Cooler temperatures will also extend work time and increase cure times. Information Provided by Resinlab L.L.C., an Ellsworth Adhesives Company.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Resinlab-EP1225-Black-Unfilled-Epoxy-Adhesive.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.970 g/cc	0.970 g/cc	Part B; TM R050-16
	1.07 g/cc	1.07 g/cc	Mixed; TM R050-16
	1.12 g/cc	1.12 g/cc	Part A; TM R050-16
Water Absorption	1.05 %	1.05 %	TM R050-35
	@Time 86400 sec	@Time 24.0 hour	
Viscosity	3000 cP	3000 cP	Part B, RVT, #4, 2.5 rpm; TM R050-12
	30000 cP	30000 cP	Mixed; TM R050-12
	150000 cP	150000 cP	Part A, RVT, #6, 2.5 rpm; TM R050-12

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	60	60	TM R050-17
Tensile Strength at Break	8.96 MPa	1300 psi	TM R050-36
Tensile Strength, Ultimate	8.96 MPa	1300 psi	TM R050-36
Tensile Strength, Yield	2.76 MPa	400 psi	TM R050-36
Elongation at Break	25 - 45 %	25 - 45 %	TM R050-36
Tensile Modulus	0.138 GPa	20.0 ksi	TM R050-36
Compressive Yield Strength	3.45 MPa	500 psi	TM R050-38
Compressive Strength	41.4 MPa	6000 psi	Ultimate; TM R050-38

Mechanical Properties	41.4 MPa Metric	6000 psi English	Break: TM R050-38 Comments
Compressive Modulus	0.172 GPa	25.0 ksi	TM R050-38
Adhesive Bond Strength	13.8 MPa	2000 psi	Lap shear; 2024 T3 Al Abraded / MEK Wipe; TM R050-37

Thermal Properties	Metric	English	Comments
CTE, linear	112 µm/m-°C	62.2 µin/in-°F	below Tg
	@Temperature <=54.0 °C	@Temperature <= 129 °F	
	190 µm/m-°C	106 µin/in-°F	above Tg
	@Temperature >=54.0 °C	@Temperature >= 129 °F	
Thermal Conductivity	0.270 W/m-K	1.87 BTU-in/hr-ft²-°F	
Maximum Service Temperature, Air	100 °C	212 °F	
Minimum Service Temperature, Air	-40.0 °C	-40.0 °F	
Glass Transition Temp, Tg	54.0 °C	129 °F	TM R050-25

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.20e+11 ohm-cm	1.20e+11 ohm-cm	
Dielectric Constant	6.3	6.3	
	@Frequency 100 Hz, Temperature 25.0 °C	@Frequency 100 Hz, Temperature 77.0 °F	
Dielectric Strength	30.1 kV/mm	765 kV/in	

Processing Properties	Metric	English	Comments
Pot Life	10 - 20 min	10 - 20 min	Mass: 50g; TM R050-19

Descriptive Properties	Value	Comments
Color	Black	
Mix Ratio	100:45	Weight
	2:1	Volume

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